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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/649,479	08/28/2000	Edward L. Wright	SATC-005	8426

7590

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EXAMINER

LEE, BENNY T

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

649479

Applicant(s)

Wright et al

Examiner

B. Lee

Group Art Unit

2817

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☒ Responsive to communication(s) filed on 16 Sept 2002
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-7 is/are pending in the application.  
Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-3; 4-6; 7 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☒ The proposed drawing correction, filed on 16 Sept 2002 is ☒ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_
  - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

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The disclosure is objected to because of the following informalities: Note that the following reference labels need to be described relative to the corresponding drawing figure:

figs. ~~7, 9~~ (CL). Appropriate correction is required.

Claim ~~2~~ is objected to since in the second line, --is-- should be inserted prior to "defined" for a proper characterization.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Berwick (of record).

Berwick (figs. 2, 3) discloses a linear-beam electron tube including electron gun (16'), interaction region (19') for providing microwave interaction with the electron beam, and collector structure (23') for receiving spent electrons. A magnetic focussing structure includes a gun-only magnet (10') and pole piece (12') adjacent electron gun (16') and adjacent a side of anode (18') which is away from the collector. The magnetic focussing structure further includes integral yoke (11') and pole piece (13'), where closed pole piece (13') is adjacent to and shields the collector from any focussing magnetic flux as depicted in Fig. 3. As a result of no magnetic field flux in the

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collector, the spent electrons inherently disperse in a manner consistent with the lack of any magnetic field flux.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4-6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berwick in view of Kosmahl ('850), both of record.

As described in the preceding rejection, Berwick discloses the claimed gun-only magnetic focussing structure except for the claimed multi-stage depressed collector.

Kosmahl ('850) in fig. 1 thereof discloses a magnetic focussing structure and a multi-stage depressed collector for a microwave tube which is not depicted. Although the microwave tube is not depicted, those of ordinary skill in the art recognize that such microwave tubes inherently

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include a cathode, an anode, an RF or microwave energy generation stage in addition to the above note focussing and collector stages.

In the above reference, it can be seen that there is no magnetic field flux appearing in each collector region of the microwave tube as depicted in Fig. 2. Accordingly, as a result of magnetic field flux in the collector, the spent electron beam inherently disperse evenly within the multi-stage collector through space discharge effects as well as the energy of such spent electrons.

Furthermore, Kosmahl recognizes the interchangeability of different types of collector structures usable for electron beam tubes of this type (i.e. see col 3, lines 27-30).

Accordingly, it would have been obvious in view of the references, taken as a whole, to have modified the single stage collector of Berwick with a multi-stage collector, such as taught by Kosmahl. Such a modification would have been considered an obvious substitution of art recognized equivalent collectors for electron beam tubes, especially since both the single stage collector of Berwick and the multi-stage collector of Kosmahl permit for the elimination of magnetic field flux within the collector, thereby suggesting art recognized equivalent between a single stage collector and a multi-stage collector.

Applicant's arguments filed 16 September 2002 have been fully considered but they are not persuasive.

With respect to the Kosmahl reference, applicants' have argued that Kosmahl does not disclose a "gun-only" type focussing structure where there is no magnetic structure adjacent the

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collector. With respect to the Berwick reference, applicants' have argued that Berwick does not include a multi-stage collector.

While the above indicated references individually lack the features indicated, it should be noted that their combination, as set forth in the above obviousness combination, meets the invention, as amended. Furthermore, Berwick does indeed anticipate claims 1-3 since it does include the gun-only magnetic focussing structure on the side opposite the collector, and claims 1-3 also do not limit the collector to being a multi-stage collector as in claims 4-6 & 7.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number (703) 308-4902.

  
BENNY T. LEE  
PRIMARY EXAMINER  
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